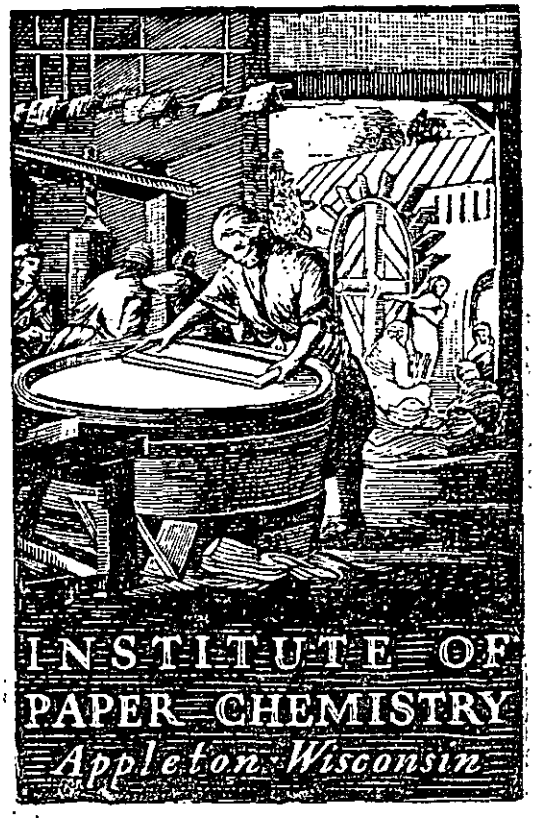

CONTINUOUS BASELINE STUDY

Project 1108-13

Progress Report 133

to

FOURDRINIER KRAFT BOARD INSTITUTE, INC.

August 1, 1958

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

CONTINUOUS BASELINE STUDY

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In conjunction with the F.K.I. Continuous Baseline Study, The Institute of Paper Chemistry has been directed to identify the participating mills by means of a scrambled system of code letters. Under this system, which was initiated in Progress Report 105, each mill is identified by a code letter different from that used for the previous month.

During the month of July, eighty-five different sample lots of 42-lb. Fourdrinier kraft linerboard from seventeen different F.K.I. mills were processed at The Institute of Paper Chemistry. A tabulation of the number of samples classified according to mill may be seen in Table I.

TABLE I

DISTRIBUTION OF 42-LB. LINERBOARD SAMPLES

Mill Code	Samples Submitted
A	4
B	1
C	0
D	3
E	6
F	3
G	9
H	2
I	1
J	8
K	1
L	8
M	10
N	2
O	8
P	6
Q	0
S	7
T	6
Total	85

These sample lots were tested for basis weight, caliper, bursting strength, and Elmendorf tear. The average strength results for each mill may be seen in Table II and are graphically presented in Figures 1 to 5. In addition to a comparison of the mill averages for the various tests, Table II also shows the current F.K.I. averages, the cumulative F.K.I. averages, and the F.K.I. indexes. The cumulative F.K.I. average is based on the results for the previous twelve months excluding the current period. Hence, in the case of the current report, it covers the period from July 1, 1957 to June 30, 1958. The F.K.I. indexes are obtained as follows:

$$\frac{\text{current F.K.I. average}}{\text{cumulative F.K.I. average}} \times 100 = \text{F.K.I. index (\%)}$$

The F.K.I. index provides a ready means of comparing the current quality with previous results. For example, the current F.K.I. average basis weight is 43.5 lb., and the cumulative F.K.I. average basis weight is 43.1 lb. Hence, the F.K.I. index for basis weight determined in per cent as indicated above is 100.9% and signifies that the current F.K.I. average basis weight is higher than the cumulative F.K.I. average.

A comparison of the results in Table II and Figure 1 shows that the average basis weight results for all mills conform to the 42-lb. specification set forth in Rule 41. Mills G and S had the highest average basis weight of 44.5 lb. which was approximately 6.0% higher than the 42-lb. specification. The lowest average basis weight of 42.5 lb., which was approximately 1.2% higher than the 42-lb. specification, was associated with Mill H.

The amount by which the mills vary from the 42-lb. specification is as follows:

Mill Code	Per Cent
A	+5.5
B	+2.9
C	--
D	+4.0
E	+3.3
F	+4.3
G	+6.0
H	+1.2
I	+5.5
J	+3.6
K	+1.7
L	+2.6
M	+2.6
N	+3.1
O	+4.0
P	+2.4
Q	--
S	+6.0
T	+2.9

A comparison of the current F.K.I. average for basis weight for this period with that for the previous period shows that basis weight increased slightly from 43.3 lb. to 43.5 lb.

A comparison of the average caliper values for the various mills (see Figure 2) shows that the current mill averages varied from a low of 12.0 points for Mill J to a high of 13.9 points for Mill I. The current F.K.I. average is 12.8 points, slightly higher than the cumulative F.K.I. average of 12.7 points, as indicated by the F.K.I. index of 100.8%.

The average bursting strength values obtained for each mill are graphically presented in Figure 3. It may be observed in Table II and Figure 3 that the current mill averages for bursting strength ranged from a low of 104 for Mill I to a high of 119 for Mill O. The current F.K.I.

average bursting strength is 112 p.s.i. g., which is slightly higher than the cumulative F.K.I. average of 111 p.s.i. g., as shown by the F.K.I. Index of 100.9%.

A graphic comparison of the Elmendorf tear results shown in Table II for the various mills is given in Figures 4 and 5. These presentations show that Mill K had the highest average machine direction tear value of 367 g./sheet and that Mill B had the lowest value of 281 g./sheet. It may be further noted in Table II that the highest cross-machine direction tear value of 406 g./sheet was associated with Mill D and that the lowest value of 349 g./sheet was associated with Mill L. It may be observed also that the current F.K.I. averages for machine direction and cross-machine direction Elmendorf tear are very nearly the same as their respective cumulative F.K.I. averages, the current F.K.I. average for machine direction Elmendorf tear being slightly lower and for the cross-machine direction slightly higher.

A comparison of the F.K.I. indexes indicates that, for the current period, the current F.K.I. averages for basis weight, caliper, bursting strength and cross-machine direction Elmendorf tear are higher than their respective cumulative F.K.I. averages, whereas the current F.K.I. average for machine direction Elmendorf tear is slightly lower than its cumulative F.K.I. average.

In order to compare the variation within a given mill, the test results for each particular mill have been tabulated in Tables III to XXI for Mills A through T, respectively.

In addition to the current and cumulative average, the mill factor and mill index are given for each mill. The cumulative mill average is the average test result obtained on the samples submitted by the particular mill for the previous twelve months excluding the current period. The mill factor and the mill index are obtained as follows:

$$\frac{\text{current mill average}}{\text{cumulative mill average}} \times 100 = \text{mill factor (\%)}$$

$$\frac{\text{current mill average}}{\text{cumulative F.K.I. average}} \times 100 = \text{mill index (\%)}$$

The mill factor and the mill index are a convenient means for comparing the current mill results either with the previous results for that particular mill or with the cumulative F.K.I. results. The reports also present a comparison of the test data obtained at the mills with test data obtained at The Institute of Paper Chemistry. These test data are presented and discussed on subsequent pages of this report.

It may be noted in Tables III through XXI that the test data include information about the sheet finish. The summarized results for the mills which submitted sample lots during the current period are as follows:

Mill Code	No. of Sample Lots W.F.	D.F.	Misc.
A	4		
B	1[a]		
C	No samples submitted.		
D	3		
E	6		
F	1,2[a]		
G	9		
H			2[b]
I	1[a]		
J	8		

(Continued on the following page.)

Mill Code	No. of Sample Lots W.F.	D.F.	Misc.
K	1		
L	8		
M	9		1[b]
N	2[a]		
O	8		
P	6		
Q	No samples submitted.		
S	7		
T	6		

[a] One side
[b] Unidentified

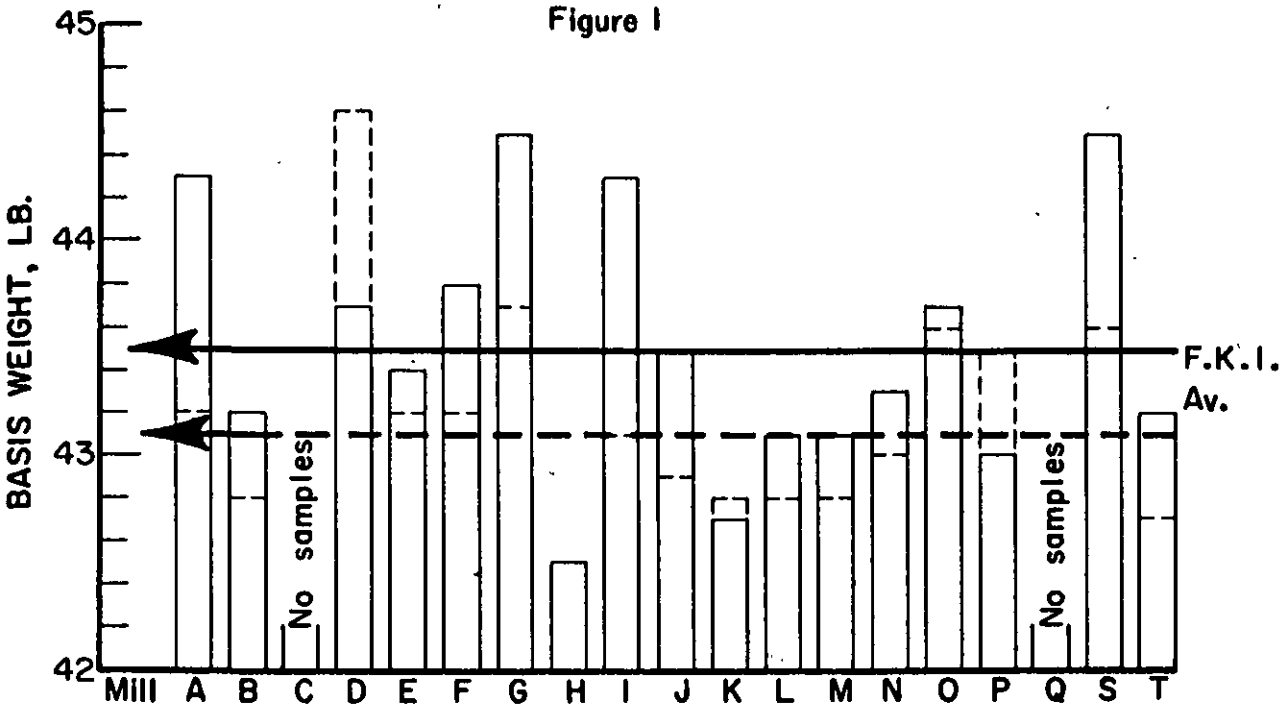
The results indicate that the majority of the participating mills are using a water finish on their 42-lb. linerboard.

TABLE II

SUMMARY OF COMPOSITE MILL AVERAGES--JULY 1 THROUGH JULY 31, 1958

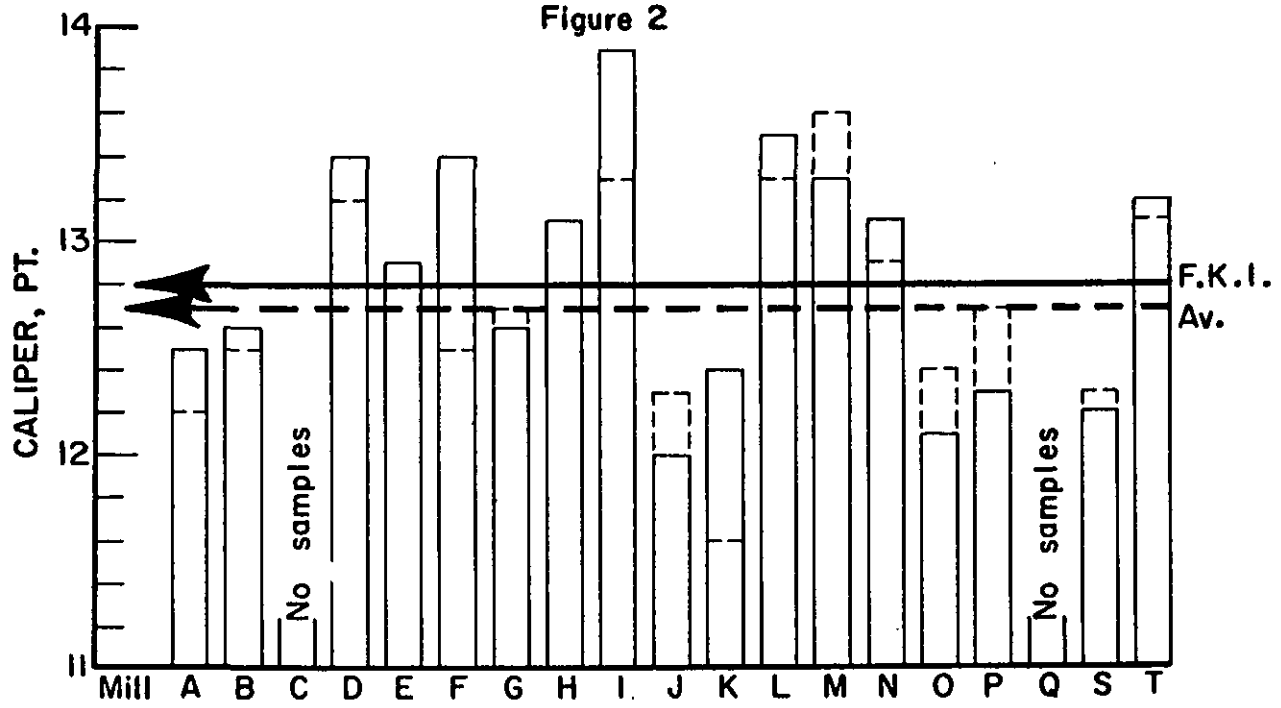
Mill	Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. gage	Elmendorf Tear, g./sheet	
				In Machine	Cross Machine
A	44.3	12.5	114	346	366
B	43.2	12.6	114	281	389
C	No samples submitted.				
D	43.7	13.4	107	350	406
E	43.4	12.9	114	349	387
F	43.8	13.4	109	346	391
G	44.5	12.6	112	333	370
H	42.5	13.1	116	351	401
I	44.3	13.9	104	307	382
J	43.5	12.0	118	297	378
K	42.7	12.4	113	367	397
L	43.1	13.5	116	285	349
M	43.1	13.3	110	324	356
N	43.3	13.1	108	319	369
O	43.7	12.1	119	345	382
P	43.0	12.3	114	287	354
Q	No samples submitted.				
S	44.5	12.2	115	357	386
T	43.2	13.2	107	354	374
Current FKI Average:	43.5	12.8	112	329	379
Cumulative FKI Average:	43.1	12.7	111	332	373
FKI Index, %	100.9	100.8	100.9	99.1	101.6

Figure 1



COMPARISON OF BASIS WEIGHT RESULTS
(Period July 1 - July 31, 1958)

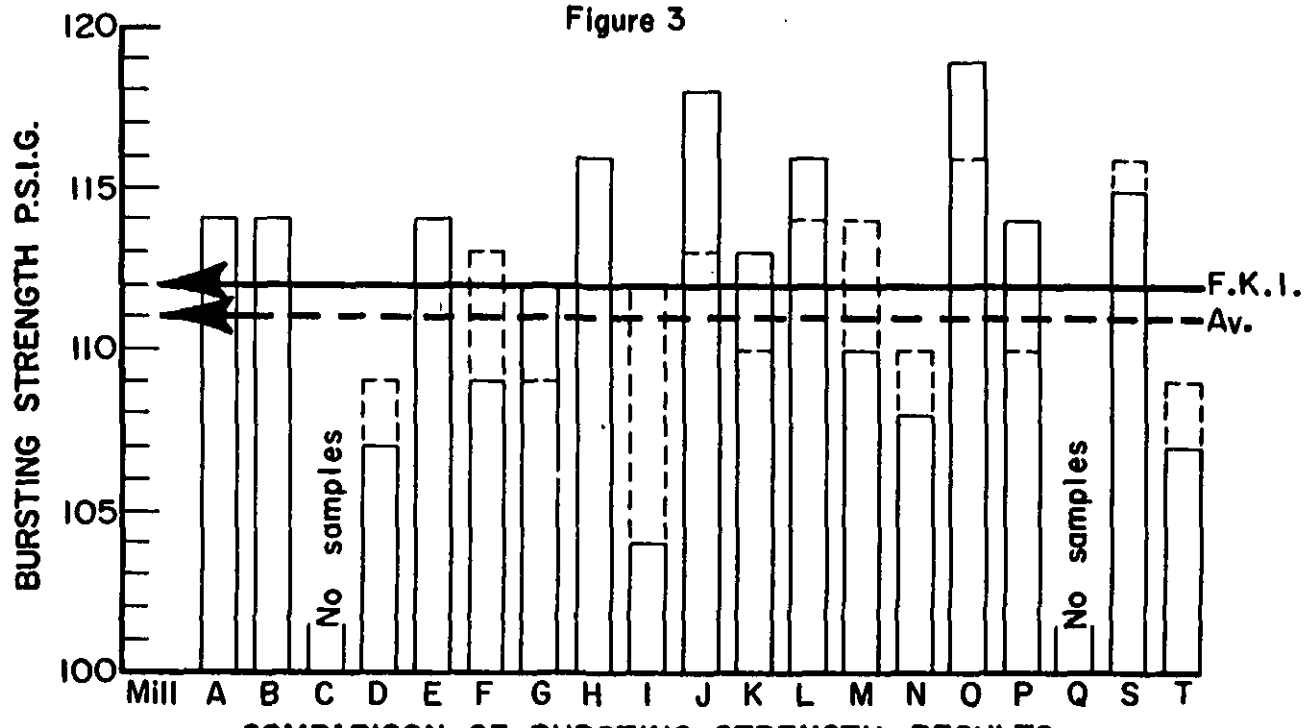
Figure 2



COMPARISON OF CALIPER RESULTS
(Period July 1 - July 31, 1958)

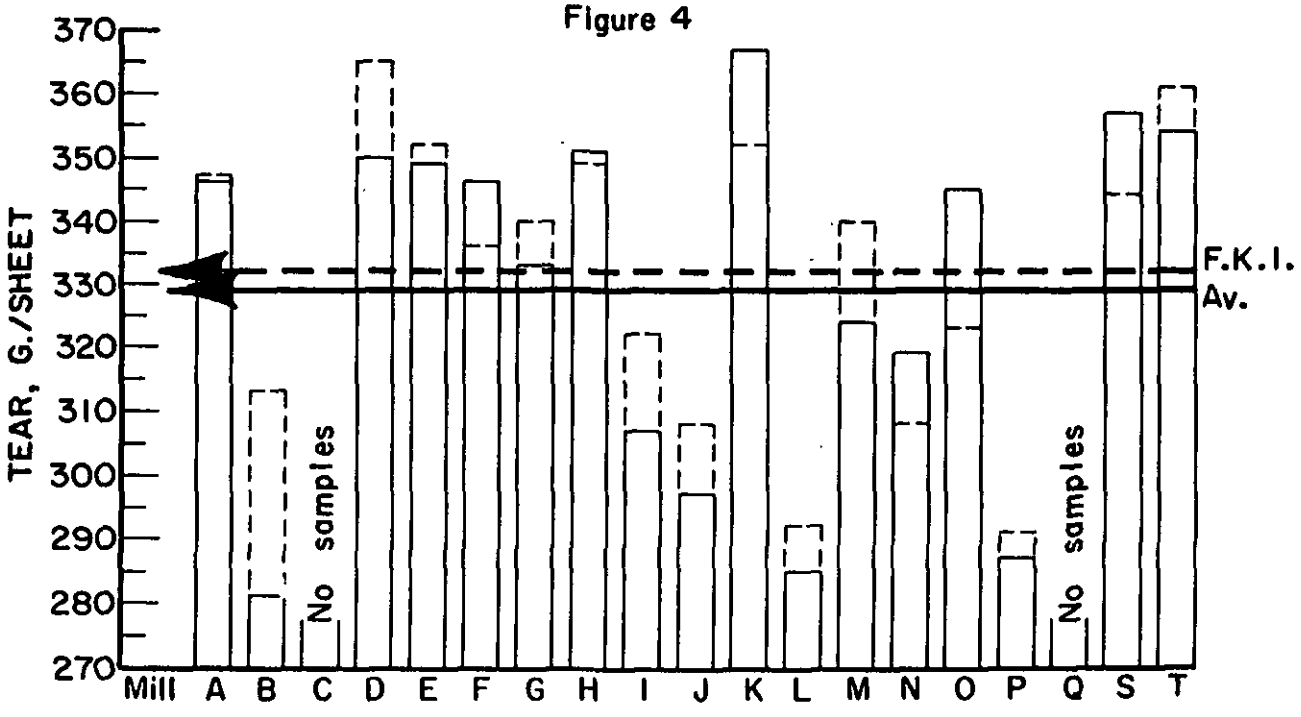
——— Current mill average
- - - - - Cumulative mill average

Figure 3



COMPARISON OF BURSTING STRENGTH RESULTS
(Period July 1 - July 31, 1958)

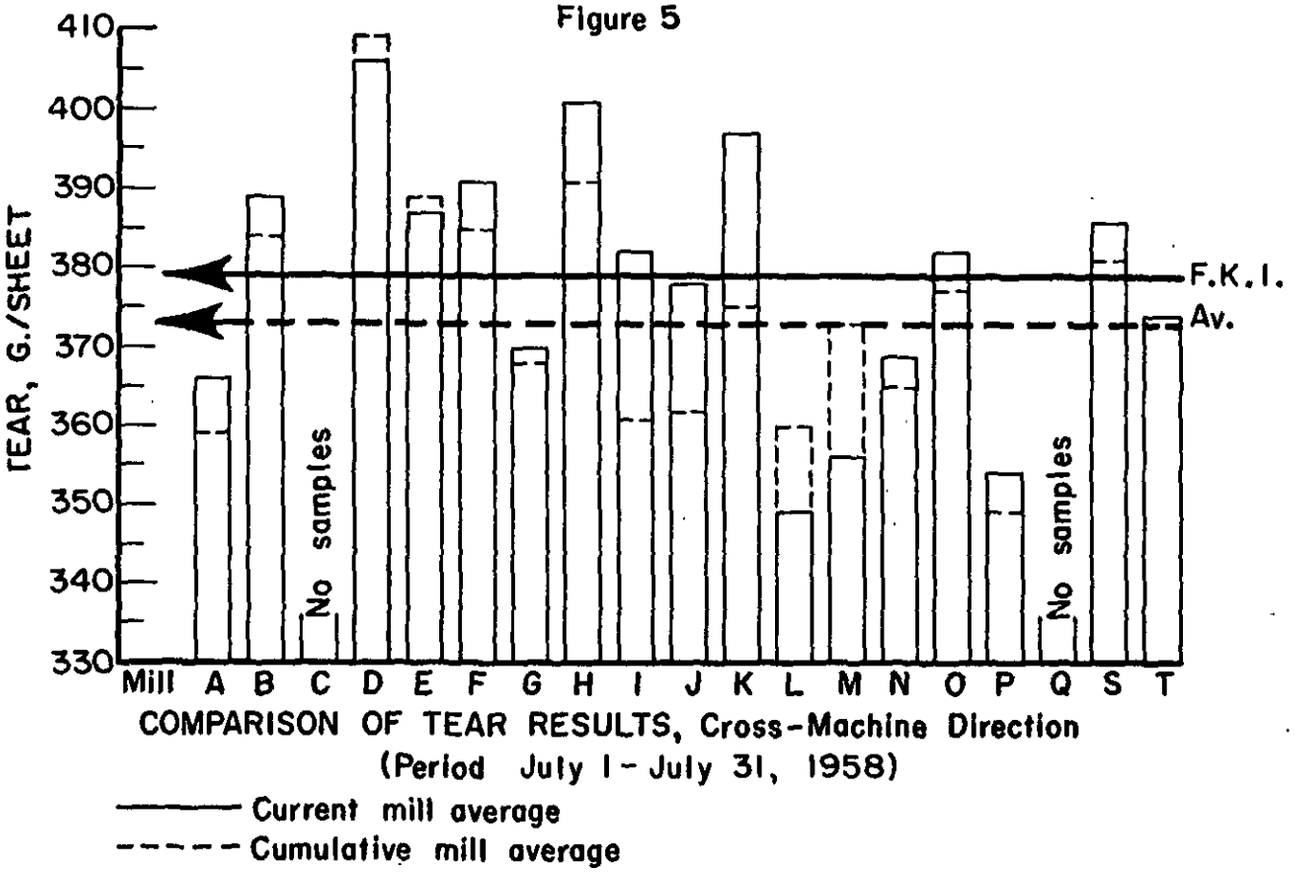
Figure 4



COMPARISON OF TEAR RESULTS, Machine Direction
(Period July 1 - July 31, 1958)

——— Current mill average
- - - - - Cumulative mill average

Figure 5



COMPARISON OF TEAR RESULTS, Cross-Machine Direction
(Period July 1 - July 31, 1958)

——— Current mill average
- - - - - Cumulative mill average

SUMMARY OF INSTITUTE DATA--JULY 1 THROUGH JULY 31, 1958

TABLE III

MILL A --42-LB. LINERBOARD

File No.	Finish	Date Recd	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
179240	W.F.	7/ 7/58	6/18/58	-	44.2	42.4	43.5	13.2	12.2	12.8	130	83	108	384	312	343[a]	384	320	356[a]
179241	W.F.	7/ 7/58	6/18/58	-	45.4	43.6	44.4	13.0	12.0	12.3	140	69	118	384	304	346[a]	400	352	373[a]
179242	W.F.	7/ 7/58	6/27/58	-	46.0	44.0	44.7	13.1	12.0	12.6	133	97	111	392	312	351[a]	400	344	371[a]
179243	W.F.	7/ 7/58	6/27/58	-	45.4	44.0	44.6	12.5	12.0	12.2	131	102	118	416	304	345[a]	392	312	365[a]
Current Mill Average:							44.3			12.5			114			346			366
Cumulative Mill Average:							43.2			12.2			111			347			359
Mill Factor, %							102.5			102.5			102.7			99.7			101.9
Mill Index, %							102.8			98.4			102.7			104.2			98.1

TABLE IV

MILL B -- 42-LB. LINERBOARD

179244	WF1S	7/ 7/58	6/30/58	1	44.0	42.6	43.2	13.1	12.0	12.6	131	96	114	328	248	281[a]	424	344	389[a]
Current Mill Average:							43.2			12.6			114			281			389
Cumulative Mill Average:							42.8			12.5			112			313			384
Mill Factor, %							100.9			100.8			101.8			89.8			101.3
Mill Index, %							100.2			99.2			102.7			84.6			104.3

[a] This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE V

MILL C -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
No samples submitted.																			

TABLE VI

MILL D -- 42-LB. LINERBOARD

179329	W.F.	7/21/58	6/11/58	1	44.4	43.2	44.0	14.5	13.0	13.5	130	86	107	448	312	360	464	368	424[a]
179330	W.F.	7/21/58	6/24/58	1	44.0	42.0	43.2	13.6	12.8	13.2	124	95	108	384	296	348	480	368	418[a]
179331	W.F.	7/21/58	6/26/58	1	44.4	42.8	43.8	13.9	12.9	13.4	131	76	106	400	232	341[a]	432	344	375[a]
Current Mill Average:							43.7			13.4			107			350			406
Cumulative Mill Average:							44.6			13.2			109			365			409
Mill Factor, %							98.0			101.5			98.2			95.9			99.3
Mill Index, %							101.4			105.5			96.4			105.4			108.8

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE VII

MILL E -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
179247	W.F.	7/ 7/58	6/19/58	2	43.8	43.2	43.5	12.9	12.2	12.7	146	90	116	392	304	346[a]	424	360	396[a]
179248	W.F.	7/ 7/58	6/19/58	2	44.2	43.6	44.0	12.9	12.2	12.5	135	83	112	432	304	367[a]	448	360	392[a]
179249	W.F.	7/ 7/58	6/24/58	2	43.4	42.4	42.9	13.2	12.4	12.9	130	76	113	376	312	335[a]	424	328	373[a]
179250	W.F.	7/ 7/58	6/25/58	2	43.4	42.2	43.0	12.9	12.2	12.8	135	98	117	416	200	325[a]	400	344	373[a]
179368	W.F.	7/25/58	7/ 9/58	2	44.4	42.8	43.6	13.7	12.8	13.3	137	93	115	384	328	355[a]	456	368	404[a]
179369	W.F.	7/25/58	7/ 9/58	2	44.4	42.6	43.5	13.8	12.9	13.2	140	87	108	408	312	367[a]	440	360	385[a]
Current Mill Average:							43.4			12.9			114			349			387
Cumulative Mill Average:							43.2			12.8			112			352			389
Mill Factor, %							100.5			100.8			101.8			99.1			99.5
Mill Index, %							100.7			101.6			102.7			105.1			103.8

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE VIII

MILL F -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
179279	W.F.	7/10/58	7/ 1/58	2	45.4	43.8	44.3	14.8	13.4	14.1	121	85	105	400	336	365[a]	432	360	383[a]
179313	WF1S	7/16/58	7/ 8/58	2	44.0	42.0	42.7	12.8	11.9	12.4	137	94	115	384	280	341	432	368	393[a]
179347	WF1S	7/23/58	7/12/58	2	45.4	43.8	44.4	14.1	13.1	13.6	127	79	108	384	296	333	448	368	397[a]
Current Mill Average:							43.8			13.4			109			346			391
Cumulative Mill Average:							43.2			12.5			113			336			385
Mill Factor, %							101.4			107.2			96.5			103.0			101.6
Mill Index, %							101.6			105.5			98.2			104.2			104.8

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE IX

MILL G -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
179237	W.F.	7/ 7/58	6/25/58	-	46.0	44.4	45.4	13.1	11.6	12.5	148	87	113	352	296	330[a]	392	352	371[a]
179238	W.F.	7/ 7/58	6/26/58	-	44.4	43.6	44.1	13.5	12.2	12.7	130	94	110	384	296	348[a]	408	312	365[a]
179239	W.F.	7/ 7/58	6/27/58	-	45.0	44.0	44.4	13.4	12.6	13.0	120	92	107	344	280	319[a]	392	312	363[a]
179276	W.F.	7/10/58	7/ 1/58	-	44.6	43.0	43.9	12.9	12.0	12.5	118	98	111	336	288	312	368	320	344[a]
179277	W.F.	7/10/58	7/ 2/58	-	45.0	44.0	44.4	13.0	12.0	12.5	130	93	112	448	312	357[a]	400	352	379[a]
179278	W.F.	7/10/58	7/ 3/58	-	44.6	43.8	44.1	12.7	12.0	12.2	137	98	119	384	304	324	408	336	372[a]
179365	W.F.	7/24/58	7/16/58	-	44.8	44.0	44.4	13.2	12.4	12.9	125	94	110	360	312	336[a]	432	344	382[a]
179366	W.F.	7/24/58	7/17/58	-	45.8	44.4	45.4	13.2	12.2	12.8	121	90	109	424	312	351[a]	408	328	366[a]
179367	W.F.	7/24/58	7/18/58	-	45.6	44.2	44.7	12.6	12.0	12.2	133	95	112	352	272	316[a]	456	336	387[a]
Current Mill Average:							44.5			12.6			112			333			370
Cumulative Mill Average:							43.7			12.7			109			340			368
Mill Factor, %							101.8			99.2			102.8			97.9			100.5
Mill Index, %							103.2			99.2			100.9			100.3			99.2

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE X

MILL H -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
179176	----	7/ 1/58	6/24/58	2	43.8	41.6	42.6	13.4	12.8	13.0	136	94	117	416	320	356[a]	432	360	405[a]
179376	----	7/28/58	7/22/58	2	43.6	41.8	42.5	13.8	12.8	13.1	134	97	116	392	304	347	464	352	396[a]
Current Mill Average:							42.5			13.1			116			351			401
Cumulative Mill Average:							42.5			12.8			112			349			391
Mill Factor, %							100.0			102.3			103.6			100.6			102.6
Mill Index, %							98.6			103.1			104.5			105.7			107.5

TABLE XI

MILL I -- 42-LB. LINERBOARD

179175	WF13	7/ 1/58	6/13/58	1	45.2	44.0	44.3	14.4	13.2	13.9	130	82	104	368	264	307	432	344	382[a]
Current Mill Average:							44.3			13.9			104			307			382
Cumulative Mill Average:							43.1			13.3			112			322			361
Mill Factor, %							102.8			104.5			92.9			95.3			105.8
Mill Index, %							102.8			109.4			93.7			92.5			102.4

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE XII

MILL J -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
179173	W.F.	7/ 1/58	6/18/58	2	45.6	42.2	43.9	12.8	12.0	12.3	130	82	112	344	264	307	432	368	389[a]
179174	W.F.	7/ 1/58	6/18/58	2	44.6	43.2	44.1	12.8	12.0	12.3	137	98	115	352	272	311	432	360	400[a]
179180	W.F.	7/ 1/58	6/23/58	2	44.0	41.8	42.8	12.0	11.0	11.5	140	107	124	336	208	273	384	320	357[a]
179181	W.F.	7/ 1/58	6/23/58	2	43.6	42.0	42.8	12.0	11.0	11.4	133	110	120	336	224	283[a]	424	336	365[a]
179255	W.F.	7/ 7/58	6/25/58	2	44.0	42.6	43.5	12.8	12.0	12.3	132	92	117	344	264	299[a]	440	352	380[a]
179256	W.F.	7/ 7/58	6/25/58	2	43.6	42.4	43.2	12.8	11.6	12.2	140	98	113	320	272	301[a]	416	352	379[a]
179315	W.F.	7/18/58	6/27/58	2	44.4	43.0	43.9	12.6	11.5	12.1	143	100	122	400	272	317[a]	432	344	380[a]
179316	W.F.	7/18/58	6/27/58	2	44.4	43.2	43.8	12.6	11.6	12.1	150	94	119	328	248	288	464	336	372[a]
Current Mill Average:							43.5			12.0			118			297			378
Cumulative Mill Average:							42.9			12.3			113			308			362
Mill Factor, %							101.4			97.6			104.4			96.4			104.4
Mill Index, %							100.9			94.5			106.3			89.5			101.3

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE XIII

MILL K -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
179309	W.F.	7/15/58	6/24/58	3	43.6	42.0	42.7	12.8	12.0	12.4	127	96	113	472	320	367[a]	456	336	397[a]
Current Mill Average:							42.7			12.4			113			367			397
Cumulative Mill Average:							42.8			11.6			110			352			375
Mill Factor, %							99.8			106.9			102.7			104.3			105.9
Mill Index, %							99.1			97.6			101.8			110.5			106.4

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE XIV

MILL L -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
179182	W.F.	7/ 1/58	6/17/58	1	43.8	42.2	43.0	14.1	13.2	13.7	142	83	119	336	256	289[a]	424	320	359[a]
179183	W.F.	7/ 1/58	6/21/58	1	44.0	42.0	43.1	13.9	12.8	13.4	135	85	113	352	272	300[a]	384	320	351[a]
179251	W.F.	7/ 7/58	6/23/58	1	43.4	42.4	43.0	13.1	11.9	12.6	134	96	116	320	232	279	384	312	355[a]
179252	W.F.	7/ 7/58	6/26/58	1	43.4	42.4	42.9	13.5	12.8	13.1	142	86	119	336	248	291[a]	384	344	361[a]
179370	W.F.	7/25/58	7/ 9/58	1	44.6	43.8	44.0	14.0	12.5	13.4	139	93	117	280	248	267[a]	368	272	318[a]
179371	W.F.	7/25/58	7/12/58	1	43.4	42.0	42.4	13.9	13.2	13.6	148	91	118	320	264	283[a]	392	328	351[a]
179372	W.F.	7/25/58	7/15/58	1	43.8	43.0	43.4	14.9	13.8	14.4	128	92	112	360	240	299[a]	376	296	333[a]
179373	W.F.	7/25/58	7/17/58	1	43.8	42.2	43.1	13.8	13.0	13.4	136	98	115	304	240	271[a]	416	336	366[a]
Current Mill Average:							43.1			13.5			116			285			349
Cumulative Mill Average:							42.8			13.3			114			292			360
Mill Factor, %							100.7			101.5			101.8			97.6			96.9
Mill Index, %							100.0			106.3			104.5			85.8			93.6

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE XV

MILL M -- 42-LB. LINERBOARD

File No	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
179296	WF1S	7/14/58	6/26/58	2	43.8	42.2	42.9	14.2	13.7	14.0	122	80	106	328	272	305	384	320	359[a]
179297	WF1S	7/14/58	7/ 7/58	2	43.8	42.2	43.0	12.9	12.0	12.3	123	80	105	368	280	320	376	304	339[a]
179298	WF1S	7/14/58	7/ 8/58	2	44.0	42.4	43.3	13.1	12.2	12.7	131	100	115	344	272	307[a]	384	288	333[a]
179299	WF1S	7/14/58	7/ 9/58	2	44.0	42.8	43.5	13.1	12.2	12.9	129	97	111	360	312	333[a]	392	320	351[a]
179335	WF1S	7/22/58	7/11/58	2	44.4	42.0	43.0	13.6	12.8	13.2	141	90	115	368	304	334[a]	416	344	373[a]
179336	----	7/22/58	7/12/58	2	44.4	43.2	43.7	14.3	13.3	13.8	139	70	109	368	280	315[a]	416	320	352[a]
179337	WF1S	7/22/58	7/13/58	2	44.0	42.2	43.0	14.0	13.0	13.6	134	91	113	384	304	335[a]	384	328	351[a]
179338	WF1S	7/22/58	7/14/58	2	44.4	43.2	43.8	14.2	13.4	13.9	135	95	112	424	304	336[a]	440	320	380[a]
179339	WF1S	7/22/58	7/15/58	2	43.2	42.0	42.5	14.0	13.2	13.6	136	90	108	384	304	335[a]	424	336	374[a]
179340	WF1S	7/22/58	7/16/58	2	43.6	42.0	42.5	13.8	13.0	13.5	127	84	109	352	288	321[a]	360	320	348[a]
Current Mill Average:							43.1			13.3			110			324			356
Cumulative Mill Average:							42.8			13.6			114			340			373
Mill Factor, %							100.7			97.8			96.5			95.3			95.4
Mill Index, %							100.0			104.7			99.1			97.6			95.4

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE XVI

MILL N -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
179171	WF1S	7/ 1/58	6/20/58	1	44.0	41.4	42.6	13.3	11.9	12.9	130	79	107	352	272	317	400	320	370[a]
179172	WF1S	7/ 1/58	6/20/58	1	45.6	42.0	43.9	14.0	13.0	13.3	136	83	110	408	288	320[a]	416	344	367[a]
Current Mill Average:							43.3			13.1			108			319			369
Cumulative Mill Average:							43.0			12.9			110			308			365
Mill Factor, %							100.7			101.6			98.2			103.6			101.1
Mill Index, %							100.5			103.1			97.3			96.1			98.9

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE XVII

MILL O -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
179245	W.F.	7/ 7/58	6/30/58	2	44.4	44.0	44.2	12.6	11.9	12.1	131	107	118	352	280	322	416	352	379[a]
179246	W.F.	7/ 7/58	6/30/58	2	44.6	41.8	44.0	12.6	12.0	12.1	130	103	118	376	272	332	400	352	375[a]
179327	W.F.	7/21/58	7/ 7/58	1	44.8	44.0	44.2	13.0	12.4	12.7	145	108	122	432	352	380[a]	456	384	413[a]
179332	W.F.	7/22/58	7/12/58	2	44.0	42.4	43.1	12.4	11.8	12.1	139	103	118	376	312	341[a]	432	352	389[a]
179333	W.F.	7/22/58	7/13/58	2	44.0	43.0	43.5	12.0	11.2	11.7	131	103	121	368	280	319	424	352	377[a]
179334	W.F.	7/22/58	7/14/58	2	44.0	42.4	43.0	12.6	11.8	12.0	143	100	120	392	304	334	408	360	384[a]
179374	W.F.	7/28/58	7/20/58	2	44.2	43.0	43.7	12.1	11.2	11.8	142	105	120	384	320	359	416	352	386[a]
179375	W.F.	7/28/58	7/20/58	1	44.0	43.2	43.7	12.3	11.3	12.0	137	93	117	440	336	376[a]	392	328	355[a]
Current Mill Average:							43.7			12.1			119			345			382
Cumulative Mill Average:							43.6			12.4			116			323			377
Mill Factor, %							100.2			97.6			102.6			106.8			101.3
Mill Index, %							101.4			95.3			107.2			103.9			102.4

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE XVIII

MILL P -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
179170	W.F.	7/ 1/58	6/ 2/58	1	43.0	41.0	42.4	12.4	11.6	12.1	139	89	116	320	256	284	352	320	335[a]
179179	W.F.	7/ 1/58	6/12/58	1	44.0	41.6	43.1	12.9	11.8	12.3	134	97	114	312	216	272[a]	376	328	352[a]
179191	W.F.	7/ 3/58	6/18/58	1	44.0	42.6	43.6	12.5	11.9	12.1	125	94	116	320	256	283	384	336	363[a]
179265	W.F.	7/ 8/58	6/23/58	1	44.0	41.2	42.6	12.7	11.8	12.2	140	93	119	328	232	289	392	336	365[a]
179328	W.F.	7/21/58	7/ 7/58	1	43.2	40.4	42.4	12.5	11.6	12.1	140	92	115	336	240	286[a]	384	336	351[a]
179364	W.F.	7/24/58	7/11/58	1	44.0	42.4	43.6	13.4	12.4	13.0	120	87	104	344	272	311[a]	424	288	357[a]
Current Mill Average:							43.0			12.3			114			287			354
Cumulative Mill Average:							43.5			12.7			110			291			349
Mill Factor, %							98.9			96.9			103.6			98.6			101.4
Mill Index, %							99.8			96.9			102.7			86.4			94.9

TABLE XIX

MILL Q -- 42-LB. LINERBOARD

No samples submitted.

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE XX

MILL S -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
179300	W.F.	7/14/58	6/20/58	-	46.0	44.8	45.6	13.1	12.0	12.5	129	90	111	368	320	342	400	344	374[a]
179301	W.F.	7/14/58	6/21/58	-	46.0	44.2	45.2	13.0	12.0	12.6	136	90	111	376	312	339	432	360	395[a]
179302	W.F.	7/14/58	6/21/58	-	44.2	43.0	43.5	12.3	11.2	11.7	136	93	115	376	312	341[a]	400	352	374[a]
179303	W.F.	7/14/58	6/28/58	-	44.8	42.0	43.8	12.3	11.3	11.9	130	83	110	392	296	351[a]	408	344	372[a]
179304	W.F.	7/14/58	7/10/58	-	44.8	43.2	43.9	13.0	11.8	12.2	134	104	120	416	352	385[a]	432	344	394[a]
179305	W.F.	7/14/58	7/10/58	-	45.4	43.2	44.3	12.8	11.7	12.3	140	102	120	416	328	367[a]	440	360	395[a]
179306	W.F.	7/14/58	7/10/58	-	46.0	45.0	45.6	12.2	11.6	12.0	140	100	116	400	344	373[a]	440	376	398[a]
Current Mill Average:							44.5			12.2			115			357			386
Cumulative Mill Average:							43.6			12.3			116			344			381
Mill Factor, %							102.1			99.2			99.1			103.8			101.3
Mill Index, %							103.2			96.1			103.6			107.5			103.5

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE XXI

MILL T -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
179177	W.	7/ 1/58	6/ 3/58	4	44.2	42.0	43.1	13.7	12.8	13.2	124	90	106	368	320	344	376	328	359[a]
179178	W.	7/ 1/58	6/18/58	2	45.6	42.6	44.3	14.2	13.4	13.9	132	85	107	408	320	375[a]	440	352	395[a]
179253	W.	7/ 7/58	6/19/58	4	44.0	42.6	43.4	13.3	12.5	12.8	123	92	108	392	328	357[a]	408	360	379[a]
179254	W.	7/ 7/58	6/26/58	4	42.0	40.4	41.2	13.2	12.3	12.7	113	82	99	384	304	346[a]	384	304	340[a]
179317	W.	7/18/58	6/27/58	4	44.0	41.8	43.4	13.3	13.0	13.1	127	91	109	384	320	351[a]	440	336	379[a]
179318	W.	7/18/58	7/ 2/58	2	44.2	42.4	43.6	13.8	13.0	13.3	132	97	115	400	288	349	432	360	396[a]
Current Mill Average:							43.2			13.2			107			354			374
Cumulative Mill Average:							42.7			13.1			109			361			373
Mill Factor, %							101.2			100.8			98.2			98.1			100.3
Mill Index, %							100.2			103.9			96.4			106.6			100.3

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

As a supplementary part of the Continuous Baseline Study, comparisons of the mill test results with those obtained at The Institute of Paper Chemistry on corresponding samples have been included in this report. As may be noted in Table XXII, the atmospheric conditions used prior to and during the testing period were relatively uniform for the mills which reported this information. However, the conditioning periods varied considerably.

TABLE XXII

Mill Code	Preconditioning R.H., %	Temp., °F.	Time, hr.	Conditioning R.H., %	Temp., °F.	Time, hr.
A		None		50	73	0.5
B		None		50	73	--
C		No samples submitted.				
D	50	73	40	50	73	--
E		None		50	73	24
F	50-51	70-75	24	50-51	70-75	24
G	34-36	77-78	8	48-52	72-73	16
H		None		50	73	24
I		None		70	88	--
J	50	73	24	50	73	24
K		None		50	73	3
L		None		59-74	86-92	--
M	50	72	24	50-52	72-74	24
N	50	74	24-67	50	74	2
O		None		50	73	24
P	39-46	69-83	0.5	50	73	48-72
Q		No samples submitted.				
S		None		50	73	48-72
T		None		53	73	--

A summary of the Institute and mill test results for the current period is shown in Table XXIII, and a comparison of differences between Institute and mill test results is given in Table XXIV for the current period and the two previous periods. The comparisons for individual sample

lots are given in Tables XXV to XLIII for the various mills. In all the comparisons given in Tables XXV to XLIII, the Institute's test values have been used as the reference line.

A comparison of the test data in Tables XXIII and XXIV reveals the level of agreement between mill and Institute data for basis weight, caliper, bursting strength, and Elmendorf tear. Table XXIII shows the over-all average difference between Institute and mill test results based on the data for all sample lots submitted by each mill for the current period. In addition, the maximum difference encountered in comparing the Institute and mill test results for a given sample lot is shown. In Table XXIV, the over-all average differences shown for each test in Table XXIII have been calculated on a percentage basis for each mill. In addition, for purposes of comparison, the average percentage differences for the preceding two periods are shown.

It may be noted in Table XXIV that the largest average difference (per cent) between the average basis weight results of the Institute and those of a given mill on corresponding samples is three per cent for the current period. By comparison, the largest average difference (per cent) noted for the previous two periods was also three per cent. Further, it may be noted that the average basis weight result for Mill M was higher than that for the Institute, the average result for Mill D was the same, and the average results for the other mills were lower. The variations associated with Mills A and L may be excessive.

The maximum variation in caliper for the current period is five per cent. This is slightly lower than the maximum variation of seven per cent for the previous two periods. Compared with the Institute's results,

the average test result for Mill P was higher, the average test result for Mill S was the same, and the average test results for the other mills were lower. The variations of 0.5 point or more may be excessive.

It may be noted in Table XXIII that the bursting strength results exhibited a maximum variation of seven per cent for the current period. The average results for Mills D, E, G, and T were higher than those for the Institute, the average results for Mills A and F were the same, and the average results for the other mills were lower. Only the variation of seven per cent associated with Mill K appears to be exceptionally large.

It may be seen in Tables XXIII and XXIV that the average machine direction tear results for Mills B, D, E, I, J, M, and P were higher than those for the Institute, and the results for the other mills were lower. The maximum variation for the current period was twenty-seven per cent. For the current period the variations associated with the results for Mills B, I, K, and N appear to be excessive.

With regard to the cross-machine direction tear results, it may be noted that the average results for Mills A, B, D, E, F, I, L, M, N, O, P, and S were higher than those for the Institute, and the average results for the other mills were lower. The maximum variation for the current period was fifteen per cent. The variations noted for Mills E and I are twelve and fifteen per cent respectively and should be questioned.

TABLE XXIII

SUMMARY OF TEST RESULT COMPARISONS (AVERAGE MILL AND INSTITUTE RESULTS)

Mills* No. Samples Compared	A 4	B 1	C 0	D 3	E 6	F 3	G 9	H 2	I 1	J 8	K 1	L 8	M 10	N 2	O 8	P 6	Q 0	S 7	T 6
Basis Weight																			
Institute	44.3	43.2		43.7	43.4	43.8	44.5	42.5	44.3	43.5	42.7	43.1	43.1	43.3	43.7	43.0		44.5	43.2
Mill	43.0	42.5		43.7	43.3	43.6	44.2	42.1	43.2	43.2	42.1	41.9	43.6	42.8	42.9	42.9		44.0	42.6
Av. Diff.**	-1.3	-0.7		0.0	-0.1	-0.2	-0.3	-0.4	-1.1	-0.3	-0.6	-1.2	+0.5	-0.5	-0.8	-0.1		-0.5	-0.6
Max. Diff.***	-2.2	-0.7		+0.4	-0.5	-0.5	-0.7	-0.6	-1.1	-0.7	-0.6	-2.1	+1.5	-0.5	-1.4	+0.4		-1.1	-1.5
Caliper																			
Institute	12.5	12.6		13.4	12.9	13.4	12.6	13.1	13.9	12.0	12.4	13.5	13.3	13.1	12.1	12.3		12.2	13.2
Mill	12.2	12.4		13.1	12.4	12.9	12.3	12.7	13.6	11.8	12.1	13.0	13.2	12.6	11.8	12.4		12.2	12.6
Av. Diff.**	-0.3	-0.2		-0.3	-0.5	-0.5	-0.3	-0.4	-0.3	-0.2	-0.3	-0.5	-0.1	-0.5	-0.3	+0.1		0.0	-0.6
Max. Diff.***	-0.7	-0.2		-0.5	-0.8	-0.7	-0.6	-0.4	-0.3	-0.4	-0.3	-1.0	+1.2	-0.5	-0.5	+0.2		+0.2	-0.9
Bursting Strength																			
Institute	114	114		107	114	109	112	116	104	118	113	116	110	108	119	114		115	107
Mill	114	110		112	117	109	113	110	100	114	105	113	109	102	117	112		114	111
Av. Diff.**	0	-4		+5	+3	0	+1	-6	-4	-4	-8	-3	-1	-6	-2	-2		-1	+4
Max. Diff.***	-11	-4		+8	+8	+5	+7	-8	-4	-9	-8	-6	-5	-7	-5	-7		-6	+10
Tearing Strength, in																			
Institute	346	281		350	349	346	333	351	307	297	367	285	324	319	345	287		357	354
Mill	344	347		359	382	341	319	--	391	299	329	267	332	277	334	311		350	336
Av. Diff.**	-2	+66		+9	+33	-5	-14	--	+84	+2	-38	-18	+8	-42	-11	+24		-7	-18
Max. Diff.***	+10	+66		+14	+61	-24	-41	--	+84	-33	-38	-41	+29	-51	-61	+35		-32	-37
Tearing Strength, Across																			
Institute	366	389		406	387	391	370	401	382	378	397	349	356	369	382	354		386	374
Mill	370	418		419	434	408	356	--	439	366	376	354	387	371	386	380		399	362
Av. Diff.**	+4	+29		+13	+47	+17	-14	--	+57	-12	-21	+5	+31	+2	+4	+26		+13	-12
Max. Diff.***	+27	+29		+37	+63	+51	-46	--	+57	-36	-21	+47	+73	+3	-48	+45		+31	-24

* Comparison based on averages involved only those samples on which mill test data were submitted.
** Average difference is the difference between the Institute mill average and the mill average based on mill test data.
*** Maximum difference encountered in comparing the Institute average and the mill averages for any sample submitted by that particular mill.

TABLE XXXII

SUMMARY OF TEST RESULT COMPARISONS (AVERAGE MILL AND INSTITUTE RESULTS)

Mills*	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	S	T
No. Samples Compared	4	1	0	3	6	3	9	2	1	8	1	8	10	2	8	6	0	7	6
Basis Weight																			
Institute	44.3	43.2		43.7	43.4	43.8	44.5	42.5	44.3	43.5	42.7	43.1	43.1	43.3	43.7	43.0		44.5	43.2
Mill	43.0	42.5		43.7	43.3	43.6	44.2	42.1	43.2	43.2	42.1	41.9	43.6	42.8	42.9	42.9		44.0	42.6
Av. Diff.**	-1.3	-0.7		0.0	-0.1	-0.2	-0.3	-0.4	-1.1	-0.3	-0.6	-1.2	+0.5	-0.5	-0.8	-0.1		-0.5	-0.6
Max. Diff.***	-2.2	-0.7		+0.4	-0.5	-0.5	-0.7	-0.6	-1.1	-0.7	-0.6	-2.1	+1.5	-0.5	-1.4	+0.4		-1.1	-1.5
Caliper																			
Institute	12.5	12.6		13.4	12.9	13.4	12.6	13.1	13.9	12.0	12.4	13.5	13.3	13.1	12.1	12.3		12.2	13.2
Mill	12.2	12.4		13.1	12.4	12.9	12.3	12.7	13.6	11.8	12.1	13.0	13.2	12.6	11.8	12.4		12.2	12.6
Av. Diff.**	-0.3	-0.2		-0.3	-0.5	-0.5	-0.3	-0.4	-0.3	-0.2	-0.3	-0.5	-0.1	-0.5	-0.3	+0.1		0.0	-0.6
Max. Diff.***	-0.7	-0.2		-0.5	-0.8	-0.7	-0.6	-0.4	-0.3	-0.4	-0.3	-1.0	+1.2	-0.5	-0.5	+0.2		+0.2	-0.9
Bursting Strength																			
Institute	114	114		107	114	109	112	116	104	118	113	116	110	108	119	114		115	107
Mill	114	110		112	117	109	113	110	100	114	105	113	109	102	117	112		114	111
Av. Diff.**	0	-4		+5	+3	0	+1	-6	-4	-4	-8	-3	-1	-6	-2	-2		-1	+4
Max. Diff.***	-11	-4		+8	+8	+5	+7	-8	-4	-9	-8	-6	-5	-7	-5	-7		-6	+10
Tearing Strength, in																			
Institute	346	281		350	349	346	333	351	307	297	367	285	324	319	345	287		357	354
Mill	344	347		359	382	341	319	--	391	299	329	267	332	277	334	311		350	336
Av. Diff.**	-2	+66		+9	+33	-5	-14	--	+84	+2	-38	-18	+8	-42	-11	+24		-7	-18
Max. Diff.***	+10	+66		+14	+61	-24	-41	—	+84	-33	-38	-41	+29	-51	-61	+35		-32	-37
Tearing Strength, Across																			
Institute	366	389		406	387	391	370	401	382	378	397	349	356	369	382	354		386	374
Mill	370	418		419	434	408	356	--	439	366	376	354	387	371	386	380		399	362
Av. Diff.**	+4	+29		+13	+47	+17	-14	--	+57	-12	-21	+5	+31	+2	+4	+26		+13	-12
Max. Diff.***	+27	+29		+37	+63	+51	-46	--	+57	-36	-21	+47	+73	+3	-48	+45		+31	-24

* Comparison based on averages involved only those samples on which mill test data were submitted.

** Average difference is the difference between the Institute mill average and the mill average based on mill test data.

*** Maximum difference encountered in comparing the Institute average and the mill averages for any sample submitted by that particular mill.

TABLE XXIV

COMPARISON OF INSTITUTE-MILL DIFFERENCES BY PERIODS
Average Differences, per cent

Mill	Period	Basis Weight	Caliper	Burst	Tear, in	Tear, across
A	Current	-3	-2	0	-0.6	+1
	132nd	-3	-2	-4	-8	-5
	131st	-1	-2	-2	+0.3	+4
B	Current	-2	-2	-4	+23	+7
	132nd	-0.5	-0.8	-2	+18	+10
	131st	-0.5	-0.8	-5	+12	+3
C	Current	--	--	---	--	--
	132nd	-0.9	-3	+2	-8	-3
	131st	-1	-4	+0.9	+6	+4
D	Current	0	-2	+5	+3	+3
	132nd	-0.2	-0.8	+4	-2	+5
	131st	--	--	--	--	--
E	Current	-0.2	-4	+3	+9	+12
	132nd	0	-2	+6	+2	+11
	131st	-0.2	-2	+2	+3	+4
F	Current	-0.5	-4	0	-1	+4
	132nd	+0.2	-2	-3	-3	+6
	131st	+0.2	-3	-6	+5	+13
G	Current	-0.7	-2	+0.9	-4	-4
	132nd	0	-3	0	-7	-6
	131st	-0.7	-5	0	-11	-2
H	Current	-0.9	-3	-5	--	--
	132nd	-1	-2	-3	--	--
	131st	--	--	--	--	--
I	Current	-2	-2	-4	+27	+15
	132nd	-3	-3	+0.9	+15	+16
	131st	-2	-3	-0.9	+5	+10
J	Current	-0.7	-2	-3	+0.7	-3
	132nd	-0.2	-3	-3	-0.7	-2
	131st	+0.2	-3	-3	-5	-7
K	Current	-1	-2	-7	-10	-5
	132nd	+0.2	-4	-10	-14	+2
	131st	--	--	--	--	--
L	Current	-3	-4	-3	-6	+1
	132nd	-3	-2	-4	-7	-0.3
	131st	-2	-2	-4	-15	-5
M	Current	+1	-0.8	-0.9	+2	+9
	132nd	+2	-1	+2	+7	+12
	131st	+3	-0.7	-0.9	+7	+10
N	Current	-1	-4	-6	-13	+0.5
	132nd	-0.9	-5	-6	-13	-1
	131st	-0.5	-4	-3	-20	-5
O	Current	-2	-2	-2	-3	+1
	132nd	-3	-2	-2	-3	+2
	131st	-2	-2	0	-6	-4
P	Current	-0.2	+0.8	-2	+8	+7
	132nd	0	+0.8	-2	+11	+11
	131st	-2	-0.8	+4	+5	+7
Q	Current	--	--	--	--	--
	132nd	--	--	--	--	--
	131st	+0.9	-2	+6	-1	+3
S	Current	-1	0	-0.9	-2	+3
	132nd	-0.7	+2	-0.9	-8	-0.8
	131st	-0.5	+0.8	+2	-4	+3
T	Current	-1	-5	+4	-5	-3
	132nd	+0.7	-7	+3	-8	0
	131st	-2	-5	-0.9	-4	-3

COMPARISON OF INSTITUTE AND MILL DATA--JULY 1 THROUGH JULY 31, 1958

TABLE XXV

MILL A -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
179240	W.F.	6/18/58	-	43.5	43.4	-0.1	12.8	12.1	-0.7	108	114	+ 6	343[a]	337	- 6	356[a]	383	+27
179241	W.F.	6/18/58	-	44.4	42.2	-2.2	12.3	12.5	+0.2	118	107	-11	346[a]	339	- 7	373[a]	355	-18
179242	W.F.	6/27/58	-	44.7	43.0	-1.7	12.6	12.1	-0.5	111	119	+ 8	351[a]	345	- 6	371[a]	363	- 8
179243	W.F.	6/27/58	-	44.6	43.3	-1.3	12.2	12.1	-0.1	118	118	0	345[a]	355	+10	365[a]	380	+15
Current Mill Average:				44.3	43.0	-1.3	12.5	12.2	-0.3	114	114	0	346	344	- 2	366	370	+ 4

TABLE XXVI

MILL B -- 42-LB. LINERBOARD

179244	WF1S	6/30/58	1	43.2	42.5	-0.7	12.6	12.4	-0.2	114	110	- 4	281[a]	347	+66	389[a]	418	+29
Current Mill Average				43.2	42.5	-0.7	12.6	12.4	-0.2	114	110	- 4	281	347	+66	389	418	+29

TABLE XXVII

MILL C -- 42-LB. LINERBOARD

No samples submitted

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE XXVIII

MILL D -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet In			Elmendorf Tear, g./sheet Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
179329	W.F.	6/11/58	1	44.0	43.8	-0.2	13.5	13.0	-0.5	107	112	+ 5	360	366	+ 6	424[a]	429	+ 5
179330	W.F.	6/24/58	1	43.2	43.6	+0.4	13.2	13.1	-0.1	108	116	+ 8	348	356	+ 8	418[a]	416	- 2
179331	W.F.	6/26/58	1	43.8	43.6	-0.2	13.4	13.2	-0.2	106	109	+ 3	341[a]	355	+14	375[a]	412	+37
Current Mill Average:				43.7	43.7	0.0	13.4	13.1	-0.3	107	112	+ 5	350	359	+ 9	406	419	+13

TABLE XXIX

MILL E -- 42-LB. LINERBOARD

179247	W.F.	6/19/58	2	43.5	43.4	-0.1	12.7	12.1	-0.6	116	116	0	346[a]	407	+61	396[a]	442	+46
179248	W.F.	6/19/58	2	44.0	43.9	-0.1	12.5	12.0	-0.5	112	115	+ 3	367[a]	395	+28	392[a]	438	+46
179249	W.F.	6/24/58	2	42.9	42.4	-0.5	12.9	12.1	-0.8	113	117	+ 4	335[a]	355	+20	373[a]	418	+45
179250	W.F.	6/25/58	2	43.0	42.9	-0.1	12.8	12.1	-0.7	117	117	0	325[a]	356	+31	373[a]	409	+36
179368	W.F.	7/ 9/58	2	43.6	43.5	-0.1	13.3	13.0	-0.3	115	118	+ 3	355[a]	392	+37	404[a]	448	+44
179369	W.F.	7/ 9/58	2	43.5	43.5	0.0	13.2	13.0	-0.2	108	116	+ 8	367[a]	390	+23	385[a]	448	+63
Current Mill Average:				43.4	43.3	-0.1	12.9	12.4	-0.5	114	117	+ 3	349	382	+33	387	434	+47

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE XXX

MILL F -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
179279	W.F.	7/ 1/58	2	44.3	43.8	-0.5	14.1	13.4	-0.7	105	110	+5	365[a]	374	+ 9	383[a]	434	+51
179313	WF1S	7/ 8/58	2	42.7	42.5	-0.2	12.4	11.9	-0.5	115	112	-3	341	317	-24	393[a]	393	0
179347	WF1S	7/12/58	2	44.4	44.3	-0.1	13.6	13.4	-0.2	108	104	-4	333	333	0	397[a]	397	0
Current Mill Average:				43.8	43.6	-0.2	13.4	12.9	-0.5	109	109	0	346	341	- 5	391	408	+17

TABLE XXXI

MILL G -- 42-LB. LINERBOARD

179237	W.F.	6/25/58	-	45.4	44.7	-0.7	12.5	12.0	-0.5	113	112	-1	330[a]	313	-17	371[a]	369	- 2
179238	W.F.	6/26/58	-	44.1	43.4	-0.7	12.7	12.1	-0.6	110	110	0	348[a]	313	-35	365[a]	355	-10
179239	W.F.	6/27/58	-	44.4	44.2	-0.2	13.0	12.7	-0.3	107	105	-2	319[a]	325	+ 6	363[a]	351	-12
179276	W.F.	7/ 1/58	-	43.9	43.7	-0.2	12.5	12.6	+0.1	111	118	+7	312	287	-25	344[a]	340	- 4
179277	W.F.	7/ 2/58	-	44.4	44.1	-0.3	12.5	12.0	-0.5	112	113	+1	357[a]	316	-41	379[a]	333	-46
179278	W.F.	7/ 3/58	-	44.1	43.8	-0.3	12.2	11.9	-0.3	119	119	0	324	309	-15	372[a]	352	-20
179365	W.F.	7/16/58	-	44.4	44.3	-0.1	12.9	12.6	-0.3	110	114	+4	336[a]	337	+ 1	382[a]	363	-19
179366	W.F.	7/17/58	-	45.4	44.8	-0.6	12.8	12.5	-0.3	109	107	-2	351[a]	356	+ 5	366[a]	368	+ 2
179367	W.F.	7/18/58	-	44.7	44.8	+0.1	12.2	12.0	-0.2	112	115	+3	316[a]	315	- 1	387[a]	376	-11
Current Mill Average:				44.5	44.2	-0.3	12.6	12.3	-0.3	112	113	+1	333	319	-14	370	356	-14

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE XXXII

MILL H -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
179176	--	6/24/58	2	42.6	42.3	-0.3	13.0	12.8	-0.2	117	112	-5	356[a]			405[a]		
179376	--	7/22/58	2	42.5	41.9	-0.6	13.1	12.7	-0.4	116	108	-8	347			396[a]		
Current Mill Average:				42.5	42.1	-0.4	13.1	12.7	-0.4	116	110	-6	351			401		

TABLE XXXIII

MILL I -- 42-LB. LINERBOARD

179175	WFIS	6/13/58	1	44.3	43.2	-1.1	13.9	13.6	-0.3	104	100	-4	307	391	+84	382[a]	439	+57
Current Mill Average:				44.3	43.2	-1.1	13.9	13.6	-0.3	104	100	-4	307	391	+84	382	439	+57

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE XXXIV

MILL J -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
179173	W.F.	6/18/58	2	43.9	43.3	-0.6	12.3	12.0	-0.3	112	112	0	307	315	+ 8	389[a]	396	+ 7
179174	W.F.	6/18/58	2	44.1	43.4	-0.7	12.3	11.9	-0.4	115	113	-2	311	309	- 2	400[a]	391	- 9
179180	W.F.	6/23/58	2	42.8	42.9	+0.1	11.5	11.4	-0.1	124	117	-7	273	286	+13	357[a]	363	+ 6
179181	W.F.	6/23/58	2	42.8	42.8	0.0	11.4	11.3	-0.1	120	118	-2	283[a]	308	+25	365[a]	382	+17
179255	W.F.	6/25/58	2	43.5	42.9	-0.6	12.3	11.9	-0.4	117	112	-5	299[a]	289	-10	380[a]	344	-36
179256	W.F.	6/25/58	2	43.2	43.1	-0.1	12.2	11.9	-0.3	113	112	-1	301[a]	300	- 1	379[a]	348	-31
179315	W.F.	6/27/58	2	43.9	43.7	-0.2	12.1	11.8	-0.3	122	113	-9	317[a]	284	-33	380[a]	346	-34
179316	W.F.	6/27/58	2	43.8	43.6	-0.2	12.1	11.8	-0.3	119	114	-5	288	305	+17	372[a]	355	-17
Current Mill Average:				43.5	43.2	-0.3	12.0	11.8	-0.2	118	114	-4	297	299	+ 2	378	366	-12

TABLE XXXV

MILL K -- 42-LB. LINERBOARD

179309	W.F.	6/24/58	3	42.7	42.1	-0.6	12.4	12.1	-0.3	113	105	-8	367[a]	329	-38	397[a]	376	-21
Current Mill Average:				42.7	42.1	-0.6	12.4	12.1	-0.3	113	105	-8	367	329	-38	397	376	-21

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE XXXVI

MILL L -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
179182	W.F.	6/17/58	1	43.0	41.8	-1.2	13.7	12.9	-0.8	119	117	-2	289[a]	248	-41	359[a]	327	-32
179183	W.F.	6/21/58	1	43.1	42.2	-0.9	13.4	13.4	0.0	113	113	0	300[a]	275	-25	351[a]	369	+18
179251	W.F.	6/23/58	1	43.0	41.7	-1.3	12.6	13.0	+0.4	116	111	-5	279	284	+ 5	355[a]	375	+20
179252	W.F.	6/26/58	1	42.9	42.1	-0.8	13.1	12.9	-0.2	119	116	-3	291[a]	267	-24	361[a]	364	+ 3
179370	W.F.	7/ 9/58	1	44.0	41.9	-2.1	13.4	12.9	-0.5	117	113	-4	267[a]	236	-31	318[a]	317	- 1
179371	W.F.	7/12/58	1	42.4	41.6	-0.8	13.6	12.9	-0.7	118	114	-4	283[a]	258	-25	351[a]	331	-20
179372	W.F.	7/15/58	1	43.4	42.4	-1.0	14.4	13.4	-1.0	112	109	-3	299[a]	286	-13	333[a]	380	+47
179373	W.F.	7/17/58	1	43.1	41.6	-1.5	13.4	12.9	-0.5	115	109	-6	271[a]	280	+ 9	366[a]	372	+ 6
Current Mill Average:				43.1	41.9	-1.2	13.5	13.0	-0.5	116	113	-3	285	267	-18	349	354	+ 5

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE XXXVII

MILL M -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet In			Elmendorf Tear, g./sheet Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
179296	WF1S	6/26/58	2	42.9	43.7	+0.8	14.0	13.5	-0.5	106	104	-2	305	328	+23	359[a]	361	+ 2
179297	WF1S	7/ 7/58	2	43.0	43.7	+0.7	12.3	13.5	+1.2	105	104	-1	320	328	+ 8	339[a]	361	+22
179298	WF1S	7/ 8/58	2	43.3	43.0	-0.3	12.7	12.5	-0.2	115	114	-1	307[a]	304	- 3	333[a]	335	+ 2
179299	WF1S	7/ 9/58	2	43.5	43.3	-0.2	12.9	12.6	-0.3	111	110	-1	333[a]	332	- 1	351[a]	341	-10
179335	WF1S	7/11/58	2	43.0	43.3	+0.3	13.2	13.0	-0.2	115	114	-1	334[a]	338	+ 4	373[a]	400	+27
179336	----	7/12/58	2	43.7	44.3	+0.6	13.8	13.4	-0.4	109	110	+1	315[a]	344	+29	352[a]	400	+48
179337	WF1S	7/13/58	2	43.0	44.5	+1.5	13.6	13.5	-0.1	113	108	-5	335[a]	360	+25	351[a]	424	+73
179338	WF1S	7/14/58	2	43.8	43.7	-0.1	13.9	13.4	-0.5	112	108	-4	336[a]	336	0	380[a]	416	+36
179339	WF1S	7/15/58	2	42.5	43.0	+0.5	13.6	13.3	-0.3	108	107	-1	335[a]	328	- 7	374[a]	432	+58
179340	WF1S	7/16/58	2	42.5	43.3	+0.8	13.5	13.4	-0.1	109	109	0	321[a]	320	- 1	348[a]	400	+52
Current Mill Average:				43.1	43.6	+0.5	13.3	13.2	-0.1	110	109	-1	324	332	+ 8	356	387	+31

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE XXXVIII

MILL N -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
179171	WF1S	6/20/58	1	42.6	42.2	-0.4	12.9	12.4	-0.5	107	100	-7	317	285	-32	370[a]	373	+ 3
179172	WF1S	6/20/58	1	43.9	43.4	-0.5	13.3	12.9	-0.4	110	105	-5	320[a]	269	-51	367[a]	369	+ 2
Current Mill Average:				43.3	42.8	-0.5	13.1	12.6	-0.5	108	102	-6	319	277	-42	369	371	+ 2

TABLE XXXIX

MILL O -- 42-LB. LINERBOARD

179245	W.F.	6/30/58	2	44.2	43.5	-0.7	12.1	11.6	-0.5	118	118	0	322	341	+19	379[a]	390	+11
179246	W.F.	6/30/58	2	44.0	42.7	-1.3	12.1	11.6	-0.5	118	116	-2	332	329	- 3	375[a]	384	+ 9
179327	W.F.	7/ 7/58	1	44.2	43.6	-0.6	12.7	12.2	-0.5	122	118	-4	380[a]	319	-61	413[a]	365	-48
179332	W.F.	7/12/58	2	43.1	42.8	-0.3	12.1	12.0	-0.1	118	118	0	341[a]	323	-18	389[a]	393	+ 4
179333	W.F.	7/13/58	2	43.5	43.1	-0.4	11.7	11.8	+0.1	121	120	-1	319	319	0	377[a]	391	+14
179334	W.F.	7/14/58	2	43.0	42.6	-0.4	12.0	11.8	-0.2	120	118	-2	334	316	-18	384[a]	388	+ 4
179374	W.F.	7/20/58	2	43.7	42.3	-1.4	11.8	11.5	-0.3	120	115	-5	359	352	- 7	386[a]	380	- 6
179375	W.F.	7/20/58	1	43.7	42.7	-1.0	12.0	12.2	+0.2	117	114	-3	376[a]	368	- 8	355[a]	396	+41
Current Mill Average:				43.7	42.9	-0.8	12.1	11.8	-0.3	119	117	-2	345	334	-11	382	386	+ 4

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE XL

MILL P -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
179170	W.F.	6/ 2/58	1	42.4	42.2	-0.2	12.1	12.2	+0.1	116	114	-2	284	310	+26	335[a]	380	+45
179179	W.F.	6/12/58	1	43.1	42.8	-0.3	12.3	12.3	0.0	114	114	0	272[a]	307	+35	352[a]	383	+31
179192	W.F.	6/18/58	1	43.6	43.4	-0.2	12.1	12.3	+0.2	116	113	-3	283	313	+30	363[a]	379	+16
179265	W.F.	6/23/58	1	42.6	42.7	+0.1	12.2	12.3	+0.1	119	112	-7	289	308	+19	365[a]	371	+ 6
179328	W.F.	7/ 7/58	1	42.4	42.8	+0.4	12.1	12.2	+0.1	115	112	-3	286[a]	306	+20	351[a]	386	+35
179364	W.F.	7/11/58	1	43.6	43.4	-0.2	13.0	13.1	+0.1	104	108	+4	311[a]	321	+10	357[a]	379	+22
Current Mill Average:				43.0	42.9	-0.1	12.3	12.4	+0.1	114	112	-2	287	311	+24	354	380	+26

TABLE XLI

MILL Q -- 42-LB. LINERBOARD

No samples submitted

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JULY 1 THROUGH JULY 31, 1958 (continued)

TABLE XLII

MILL S -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
179300	W.F.	6/20/58	-	45.6	45.1	-0.5	12.5	12.5	0.0	111	111	0	342	333	- 9	374[a]	405	+31
179301	W.F.	6/21/58	-	45.2	44.1	-1.1	12.6	12.7	+0.1	111	110	- 1	339	341	+ 2	395[a]	401	+ 6
179302	W.F.	6/21/58	-	43.5	43.5	0.0	11.7	11.9	+0.2	115	117	+ 2	341[a]	343	+ 2	374[a]	389	+15
179303	W.F.	6/28/58	-	43.8	43.3	-0.5	11.9	12.0	+0.1	110	108	- 2	351[a]	344	- 7	372[a]	384	+12
179304	W.F.	7/10/58	-	43.9	43.3	-0.6	12.2	12.4	+0.2	120	119	- 1	385[a]	353	-32	394[a]	397	+ 3
179305	W.F.	7/10/58	-	44.3	43.9	-0.4	12.3	12.3	0.0	120	114	- 6	367[a]	364	- 3	395[a]	408	+13
179306	W.F.	7/10/58	-	45.6	44.6	-1.0	12.0	12.0	0.0	116	116	0	373[a]	368	- 5	398[a]	405	+ 7
Current Mill Average:				44.5	44.0	-0.5	12.2	12.2	0.0	115	114	- 1	357	350	- 7	386	399	+13

TABLE XLIII

MILL T -- 42-LB. LINERBOARD

179177	W.	6/ 3/58	4	43.1	42.3	-0.8	13.2	12.3	-0.9	106	113	+ 7	344	322	-22	359[a]	354	- 5
179178	W.	6/18/58	2	44.3	43.5	-0.8	13.9	13.1	-0.8	107	108	+ 1	375[a]	375	0	395[a]	373	-22
179253	W.	6/19/58	4	43.4	43.1	-0.3	12.8	12.5	-0.3	108	108	0	357[a]	320	-37	379[a]	365	-14
179254	W.	6/26/58	4	41.2	42.5	+1.3	12.7	12.4	-0.3	99	109	+10	346[a]	333	-13	340[a]	350	+10
179317	W.	6/27/58	4	43.4	42.1	-1.3	13.1	12.5	-0.6	109	111	+ 2	351[a]	348	- 3	379[a]	355	-24
179318	W.	7/ 2/58	2	43.6	42.1	-1.5	13.3	12.7	-0.6	115	118	+ 3	349	317	-32	396[a]	373	-23
Current Mill Average:				43.2	42.6	-0.6	13.2	12.6	-0.6	107	111	+ 4	354	336	-18	374	362	-12

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.